

Claims

- [c1] An apparatus for producing co-extruded pasta from pasta ingredients and filler comprises:
- a pasta dough extruder for producing a pasta strand;
 - means for converting the pasta strand into a plurality of strands;
 - a plurality of co-extrusion die inserts positioned in a straight line for forming and filling the pasta strands; and,
 - a single crimp/cut die for forming a predetermined pasta configuration.
- [c2] An apparatus for producing co-extruded pasta in accordance with Claim 1 further including:
- a feed hopper having an input for receiving pasta ingredients and an output;
 - a mixer located at the hopper output for combining the ingredients into a mixture; and, wherein the extruder comprises
 - an auger screw coupled to the mixer for forming the mixture into a cylindrical strand of pasta dough.
- [c3] An apparatus for producing co-extruded pasta in accordance with Claim 2 wherein the means for converting the pasta strand into a plurality of strands comprises:
- a first Y-manifold for dividing the dough strand from the extruder into two continuous strands of dough; and,
 - means for subdividing the two strands of dough into four continuous strands of dough.
- [c4] An apparatus for producing co-extruded pasta in accordance with Claim 1 further including:
- a plurality of adjustable metering valves to adjust the flow of dough to the co-extrusion die inserts;
 - means for filling the co-extruded strands; and,
 - a conveyor receiving the formed and cut pasta from the single die.
- [c5] An apparatus for producing co-extruded pasta in accordance with Claim 4 further including:
- a hot water cooker receiving the formed and filled pasta from the conveyor.

[c6] An apparatus for producing co-extruded pasta in accordance with Claim 4 further including:
a filling means having an input to receive filling and an output;
an eight column positive displacement pump coupled to the output of the filling means, each of said independent displacement pumps servicing a co-extrusion die insert, and including eight flexible hoses of equal length joining each pump to a corresponding die insert.

[c7] An apparatus for producing co-extruded pasta in accordance with Claim 6 further including:
the pump includes variable speed control to control the weight/volume of filling through the hoses.

[c8] An apparatus for producing co-extruded pasta in accordance with Claim 4 further including:
a backing roller positioned adjacent the crimp/cut die between which the filled pasta dough strands drop vertically and are crimp-sealed and cut to length.

[c9] An apparatus for producing co-extruded pasta in accordance with Claim 9 wherein:
the pasta is rigatoni.

[c10] A method for producing co-extruded pasta from pasta ingredients and a filler comprising:
feeding the pasta ingredients to a mixer;
mixing the ingredients and moving the mixture to an extruder;
extruding the mixture to form a cylindrical strand of pasta dough;
dividing the dough into a plurality of strands;
feeding and individually metering the strand flow to a plurality of co-extrusion die inserts arranged in a straight line; and,
crimping and cutting the co-extruded pasta strands to form a predetermined stuffed pasta configuration.

[c11] A method for producing co-extruded pasta in accordance with Claim 10 further including the steps of:

